8101-27

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION	SITE NUMBER (to be assigned by Hq)
6	LA01317

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition *(Section II)*. File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Tack Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET (or other identifier)		
DELTA SHIPYARD (Formerly a division of Delta Ironworks)	Industrial Blvd.		
C. CITY	**D. STATE**	**E. ZIP CODE**	**F. COUNTY NAME**
Houma	LA	70360	Terrebonne Parish

G. SITE OPERATOR INFORMATION

1. NAME	2. TELEPHONE NUMBER		
Ralph Arceneaux, Vice President	(504)868-7450		
3. STREET	**4. CITY**	**5. STATE**	**6. ZIP CODE**
Industrial Blvd.	Houma	LA	70360

H. REALTY OWNER INFORMATION *(if different from operator of site)*

1. NAME	2. TELEPHONE NUMBER	
Leon Toups, President, Delta Services Industries	(504)868-7450	
3. CITY	**4. STATE**	**5. ZIP CODE**
Houma (P. O. Box 101)	LA	70361

I. SITE DESCRIPTION
See Attachment "A"

J. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE

II. TENTATIVE DISPOSITION *(complete this section last)*

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.)	B. APPARENT SERIOUSNESS OF PROBLEM
	☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
Deborah Vaughn	(214)742-4521	3/11/81

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME	2. TITLE	
Deborah A. Vaughn *Deborah A. Vaughn*	FIT, Geologist	
3. ORGANIZATION	**4. TELEPHONE NO. (area code & no.)**	
Ecology & Environment, Inc., 1509 N. Main, Suite 814, Dallas, TX 75201	(214)742-4521	

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
Gordon Duncan	Ecology & Environment	(214)742-4521

C. SITE REPRESENTATIVES INTERVIEWED *(corporate officials, workers, residents)*

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
Leon Toups	President (504)868-7450	Industrial Blvd., Houma, LA 70360
Louis E. Talbot	Exec. Vice President, Delta Svcs. (504)868-7450	" " "
Ralph Arceneaux	Vice President (504)868-7450	" " "
Chris Olivier	Engineer, Delta Shipyard (504)868-7450	" " "

9418077

Continue On Reverse

Continued From Front

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste) (See Attachment "B")

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
Delta Shipyards	(504)868-7450	Industrial Blvd.,Houma, LA	Oily Wastes

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
March Chemical, Inc.		P.O. Box 1197, Denham Springs, LA 70726	Oily Wastes
Steam Services, Inc.		4421 Conlin St., # 203, Metaire, LA 70002	Oily Wastes
Richard A. Williams Exploration Corp.		3500 N. Causeway, Suite 1560 Metaire, LA 70002	Oily Wastes (See Attach "A")

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS
N/A		

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
3/11/81	8:45 a.m.	[X] 1. PERMISSION [ ] 2. WARRANT

J. WEATHER (describe)
Sunny; 70°F

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)	X	None taken during this inspection.	

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS
None		

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS: [X] a. GROUND [ ] b. AERIAL

2. PHOTOS IN CUSTODY OF: EPA Region VI (see attached photos)

D. SITE MAPPED?

[X] YES. SPECIFY LOCATION OF MAPS: EPA Region VI (see attached map and sketches)

E. COORDINATES

1. LATITUDE (deg.-min.-sec.)	2. LONGITUDE (deg.-min.-sec.)
29°34'02" N	90°42'18" W

V. SITE INFORMATION

A. SITE STATUS

[X] 1. ACTIVE (Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

[ ] 2. INACTIVE (Those sites which no longer receive wastes.)

[ ] 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

[ ] 1. NO [X] 2. YES (specify generator's four-digit SIC Code): 3731, 3732

C. AREA OF SITE (in acres)

Approx. 40

D. ARE THERE BUILDINGS ON THE SITE?

[ ] 1. NO [X] 2. YES (specify):

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP	X	2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
X	4. TRUCK	X	4. TANK, ABOVE GROUND	X	4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

[X] 1. STORAGE [ ] 2. INCINERATION [ ] 3. LANDFILL [X] 4. SURFACE IMPOUNDMENT [ ] 5. DEEP WELL

[ ] 6. CHEM/BIO/PHYS TREATMENT [ ] 7. LANDFARM [ ] 8. OPEN DUMP [ ] 9. TRANSPORTER [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

[X] 1. LIQUID [ ] 2. SOLID [ ] 3. SLUDGE [ ] 4. GAS

B. WASTE CHARACTERISTICS

[ ] 1. CORROSIVE [X] 2. IGNITABLE [ ] 3. RADIOACTIVE [X] 4. HIGHLY VOLATILE

[ ] 5. TOXIC [ ] 6. REACTIVE [ ] 7. INERT [ ] 8. FLAMMABLE

[ ] 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Yes. Manifests and records are kept at the shipyard office.

Continue On Reverse

Continued From Front

VII. WASTE RELATED INFORMATION *(continued)*

2. Estimate the amount *(specify unit of measure)* of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT 500	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE 55 gal drums/year	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
[ ] (1) PAINT, PIGMENTS	[X] (1) OILY WASTES	[ ] (1) HALOGENATED SOLVENTS	[ ] (1) ACIDS	[ ] (1) FLYASH	[X] (1) LABORATORY, PHARMACEUT.
[ ] (2) METALS SLUDGES	[X] (2) OTHER *(specify)*: Tank bottoms	[ ] (2) NON-HALOGNTD. SOLVENTS	[ ] (2) PICKLING LIQUORS	[ ] (2) ASBESTOS	[ ] (2) HOSPITAL
[ ] (3) POTW		[ ] (3) OTHER *(specify)*:	[ ] (3) CAUSTICS	[ ] (3) MILLING/MINE TAILINGS	[ ] (3) RADIOACTIVE
[ ] (4) ALUMINUM SLUDGE			[ ] (4) PESTICIDES	[ ] (4) FERROUS SMELTING WASTES	[ ] (4) MUNICIPAL
[ ] (5) OTHER *(specify)*:			[ ] (5) DYES/INKS	[ ] (5) NON-FERROUS SMLTG. WASTES	[ ] (5) OTHER *(specify)*:
			[ ] (6) CYANIDE	[ ] (6) OTHER *(specify)*:	
			[ ] (7) PHENOLS		
			[ ] (8) HALOGENS		
			[ ] (9) PCB		
			[ ] (10) METALS		
			[ ] (11) OTHER *(specify)*:		

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE *(place in descending order of hazard)*

1. SUBSTANCE	2. FORM *(mark 'X')*			3. TOXICITY *(mark 'X')*				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			
Slop Oil		X				X		68477-26-9	250	bbls per yr
Tank Bottoms		X				X		68476-53-9	250	bbls per yr

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

[ ] A. HUMAN HEALTH HAZARDS

Continued From Page 4

VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☒ F. CONTAMINATION OF GROUND WATER

Contamination of ground water could occur due to infiltration of oil contaminated waters generated in the oil/water separation process. This contamination should be minimal because soil permeabilities at the site are very low (10^{-7} to 10^{-8} cm/sec). See Attachment "C". Sampling of monitoring wells would determine whether contamination has occurred.

☐ G. CONTAMINATION OF SURFACE WATER

Continued From Front

VIII. HAZARD DESCRIPTION *(continued)*

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☐ J. CONTAMINATION OF AIR

☐ K. NOTICEABLE ODORS

☒ L. CONTAMINATION OF SOIL

Some staining of soils from oily wastes waters in the surface impoundments has occurred (see photos). Soil contamination appears to be limited to the immediate area surrounding the surface impoundments.

☐ M. PROPERTY DAMAGE

Continued From Page 6

VIII. HAZARD DESCRIPTION *(continued)*

☐ N. FIRE OR EXPLOSION

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*:

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE *(specify units)*
1. IN RESIDENTIAL AREAS	250	250	55	1 Mile
2. IN COMMERCIAL OR INDUSTRIAL AREAS	2000	2000	25	1 Mile
3. IN PUBLICLY TRAVELLED AREAS	5000	5000	0	1 Mile
4. PUBLIC USE AREAS *(parks, schools, etc.)*	0	0	0	1 Mile

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER *(specify unit)*	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
1 to 2 Ft.	South	None
D. POTENTIAL YIELD OF AQUIFER	**E. DISTANCE TO DRINKING WATER SUPPLY** *(specify unit of measure)*	**F. DIRECTION TO DRINKING WATER SUPPLY**
>500 Gallons per min.	.5 Miles	West

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY ≤ 15 CONNECTIONS* ☒ 2. COMMUNITY *(specify town)*: Houma Water Dept. (City Reservoir Little Bayou Black)

☒ 3. SURFACE WATER ☐ 4. WELL

Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA *(continued)*

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH *(specify unit)*	3. LOCATION *(proximity to population/buildings)*	4. NON-COMMUNITY *(mark 'X')*	5. COMMUNITY *(mark 'X')*
None				

I. RECEIVING WATER

1. NAME: Houma Navigation Canal

☐ 2. SEWERS ☒ 3. STREAMS/RIVERS ☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER *(specify)*:

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

Fish, wildlife and other aquatic and semi-aquatic life, secondary contact recreations, Part of the Terrebonne Watershed.

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☒ C. 100 YEAR FLOOD PLAIN ☒ D. WETLAND

☒ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK *(specify below)*	'X'	C. OTHER *(specify below)*
	1. SAND	X	Quaternary Terrace & Alluvial Deposits		
X	2. CLAY	X	"		
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH *(100,000 to 1000 cm/sec.)* ☐ C. HIGH *(1000 to 10 cm/sec.)*

☐ D. MODERATE *(10 to .1 cm/sec.)* ☐ E. LOW *(.1 to .001 cm/sec.)* ☒ F. VERY LOW *(.001 to .00001 cm/sec.)*

G. RECHARGE AREA

☒ 1. YES ☐ 2. NO 3. COMMENTS: Only in that it is a coastal wetland

H. DISCHARGE AREA

☒ 1. YES ☐ 2. NO 3. COMMENTS: Only in that it is a coastal wetland.

I. SLOPE

1. ESTIMATE % OF SLOPE: 0 - .5%

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.: South

J. OTHER GEOLOGICAL DATA

See Attachment "C"

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE *(e.g., RCRA, State, NPDES, etc.)*	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED *(mo., day, & yr.)*	E. EXPIRATION DATE *(mo., day, & yr.)*	F. IN COMPLIANCE *(mark 'X')*		
					1. YES	2. NO	3. UNKNOWN
RCRA	EPA	LA0058473413	Unk.	Unk.	X		
NPDES-ISS #	EPA	6D-343-I1	10/22/80	Unk.	X		
NPDES	Louisiana	LA# 0059897	Unk.	Unk.	X		

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☒ NONE ☐ YES *(summarize in this space)*

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition *(Section II)* information on the first page of this form.

STORAGE FACILITIES SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. STORAGE AREA HAS CONTINUOUS IMPERVIOUS BASE
[X] YES [ ] NO

2. STORAGE AREA HAS A CONFINEMENT STRUCTURE
[X] YES [ ] NO

3. EVIDENCE OF LEAKAGE/OVERFLOW *(If "Yes", document where and how much runoff is overflowing or leaking from containment)*
[ ] YES [X] NO

4. ESTIMATE TYPE AND NUMBER OF BARRELS/CONTAINERS
5 above ground storage tanks for recycled oil. See photos 1 & 5.

5. GLASS OR PLASTIC STORAGE CONTAINERS USED
[ ] YES [X] NO

6. ESTIMATE NUMBER AND CAPACITY OF STORAGE TANKS
Approx. 100,000 gallons.

7. NOTE LABELING ON CONTAINERS
Storage tanks are labeled with safety notices.

8. EVIDENCE OF LEAKAGE CORROSION OR BULGING OF BARRELS/CONTAINERS/STORAGE TANKS *(If "Yes", document evidence. Describe location and extent of damage. Take PHOTOGRAPHS)*
[ ] YES [X] NO

9. DIRECT VENTING OF STORAGE TANKS
[X] YES [ ] NO

10. CONTAINERS HOLDING INCOMPATIBLE SUBSTANCES *(If "Yes", document evidence. Describe location and identity of hazardous waste. Take PHOTOGRAPHS.)*
[ ] YES [X] NO

11. INCOMPATIBLE SUBSTANCES STORED IN CLOSE PROXIMITY *(If "Yes", document evidence. Describe location and identity of hazardous waste. Take PHOTOGRAPHS.)*
[ ] YES [X] NO

12. ADEQUATE CONTAINER WASHING AND REUSE PRACTICES
[X] YES [ ] NO

13. ADEQUATE PRACTICES FOR DISPOSAL OF EMPTY STORAGE CONTAINERS
[X] YES [ ] NO Non-disposable storage containers.

SURFACE IMPOUNDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT

Two identical impoundments in filled marsh area. See photo #5.

2. STABILITY/CONDITION OF EMBANKMENTS

Good. See photo #4.

3. EVIDENCE OF SITE INSTABILITY *(Erosion, Settling, Sink Holes, etc.)*

☐ YES ☒ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE

☐ YES ☒ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT

☒ YES ☐ NO

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT

☐ YES ☒ NO

7. IMPOUNDMENT HAS LINER SYSTEM

☐ YES ☒ NO

7a. INTEGRITY OF LINER SYSTEM CHECKED

☐ YES ☐ NO N/A

7b. FINDINGS

Subsurface soils have permeability of 10^{-7} to 10^{-8} cm/sec. See Attachment "C".

8. SOIL STRUCTURE AND SUBSTRUCTURE

Medium gray organic clay at surface to soft gray silty clay with sand traces at 40 to 50 feet.

9. MONITORING WELLS

☒ YES ☐ NO Two (2) wells installed. (See Attachment "C" - monitoring well logs.)

10. LENGTH, WIDTH, AND DEPTH

LENGTH 75' (each) WIDTH 40' (each) DEPTH 5' (each) Two impoundments.

11. CALCULATED VOLUMETRIC CAPACITY

15,000 $ft.^3$

12. PERCENT OF CAPACITY REMAINING

30%

13. ESTIMATE FREEBOARD

1.5 ft.

14. SOLIDS DEPOSITION

☒ YES ☐ NO Low solids deposited.

15. DREDGING DISPOSAL METHOD

Unknown

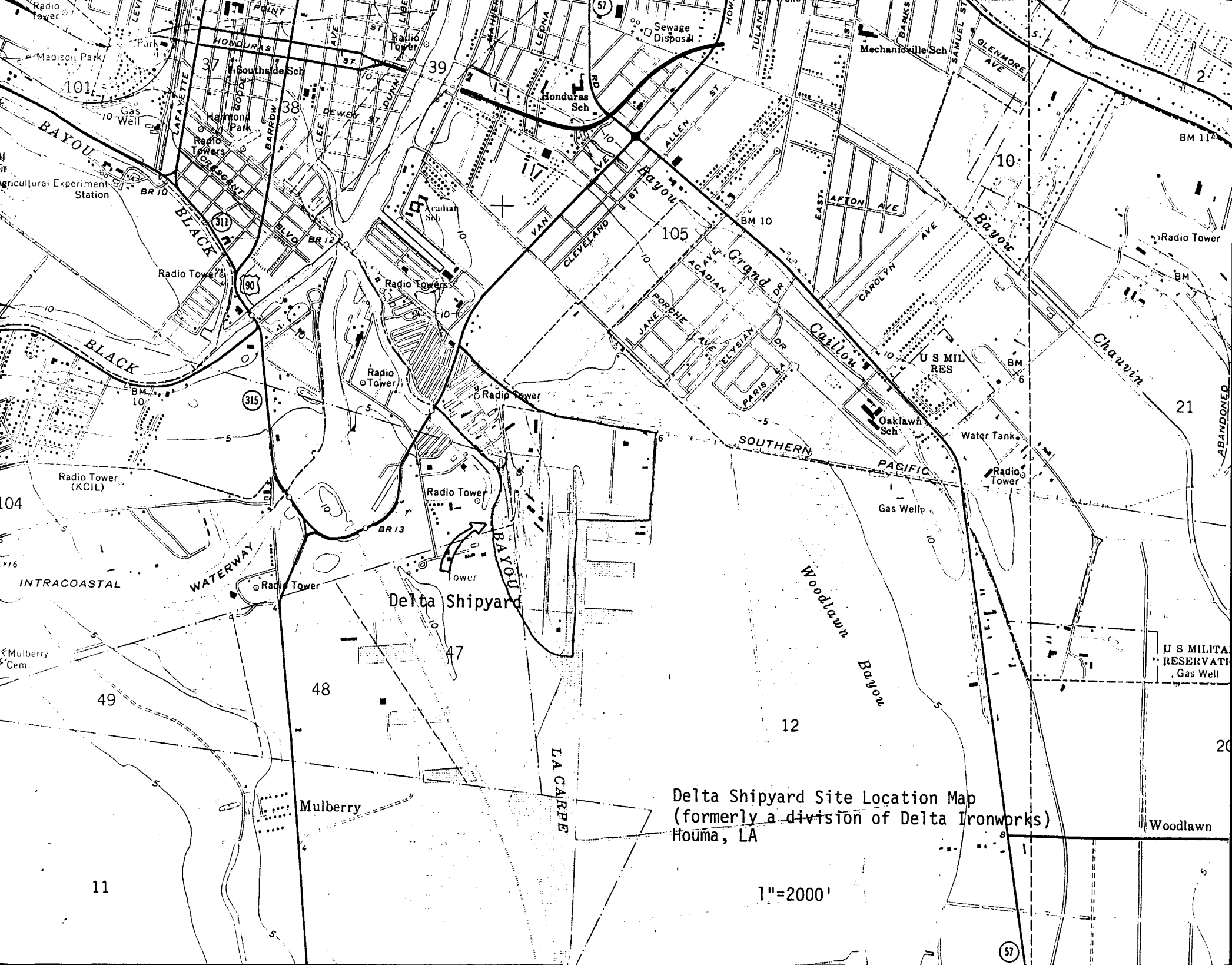
16. OTHER EQUIPMENT

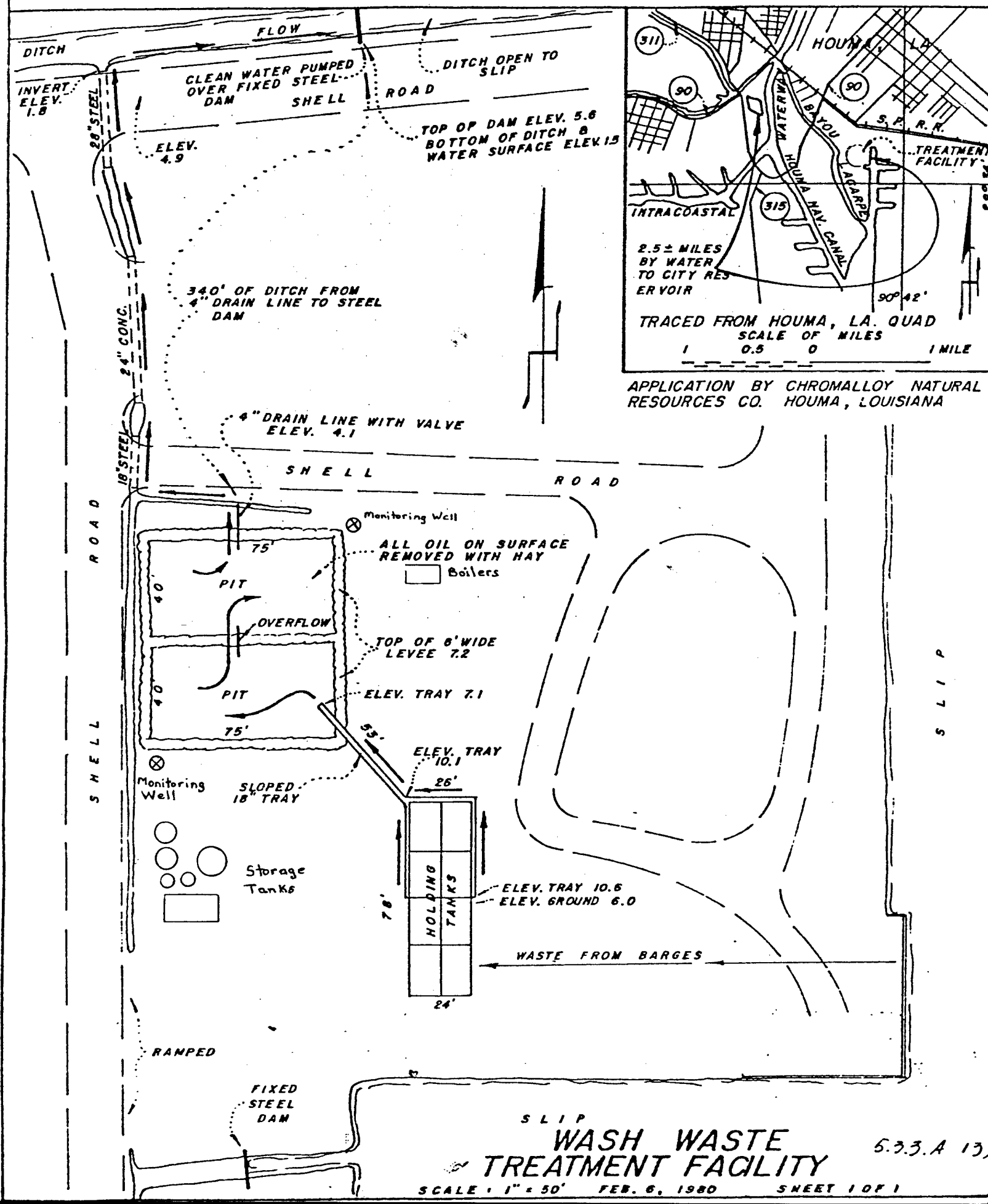
ATTACHMENT A

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT SUPPLEMENT SHEET

Instruction - This sheet is provided to give additional information in explanation of a question on the form T2070-3.

Corresponding number on form	Additional Remark and/or Explanation
I, i.	Delta Ironwords was a large industrial park (approximate 165 acres located on Industrial Blvd. in southeast Houma, LA. . The corporation of Delta Ironworks owned and operated 7 divisions, all located within the Delta Ironworks industrial facilities. These 7 divisions were: (1) Delta Shipyard - repair and painting of ships. (2) Delta Fabrication - produces offshore oil support equipment (platforms). (3) Delta Construction - produces pipes. (4) Delta Safety & Supply - distributes safety equipment and constructs fire safety equipment. (5) Heldenbrand - inspection, repair and modification of drill pipes. (6) Delta mud & chemical - distributor of drilling muds. (7) Gemoco - construction of offshore oil drill support equipment In 1969, Delta Ironworks was sold to Chromalloy American Corp., St. Louis, MO. Chromalloy maintained all 7 divisions until 1980. In November 1980 Chromalloy sold 5 of the divisions to Delta Services Industries, keeping Delta Mud & Chemical and Gemoco. At the present time the old Delta Ironworks (LA 01317) area houses the same 7 divisions listed above, but has two owners: (1) Delta Services Industries, Houma, LA and (2) Chromalloy American Corp.,M Upon inspecting the facilities, the FIT representatives found that only Delta Shipyard, owned by Delta Services Industries, may deal with hazardous wastes that could potentially pose a contamination problem. Delta Shipyard consists of cleaning and repair facilities for smal cargo and fishing vessels. Before any repair work may commence th vessels must be certified vapor free by the Coast Guard. The vessels are steam cleaned and the oily wastes are removed. The generated oils and waste waters are sent through a separation process after which the waste oil is recovered and sold. The wastes are stored in evaporation ponds (surface impoundments).
III, E.	Clayton L. Holden, P.O. Box 151, Chalmette, LA. (no longer used because he refuses to handle a manifest), Oily Wastes J & L Oils, P. O. Box 209, Geismar, LA 70734, (504)673-6785, Oily Wastes M. K. Fuels, Inc., P. O. Box 2802, Baton Rouge, LA 70821, (504)343-4662, Oily Wastes


Delta Shipyard
Mulberry
Woodlawn
Delta Shipyard Site Location Map
(formerly a division of Delta Ironworks)
Houma, LA
1"=2000'



APPLICATION BY CHROMALLOY NATURAL RESOURCES CO. HOUMA, LOUISIANA

WASH WASTE TREATMENT FACILITY

5.3.3.A 13

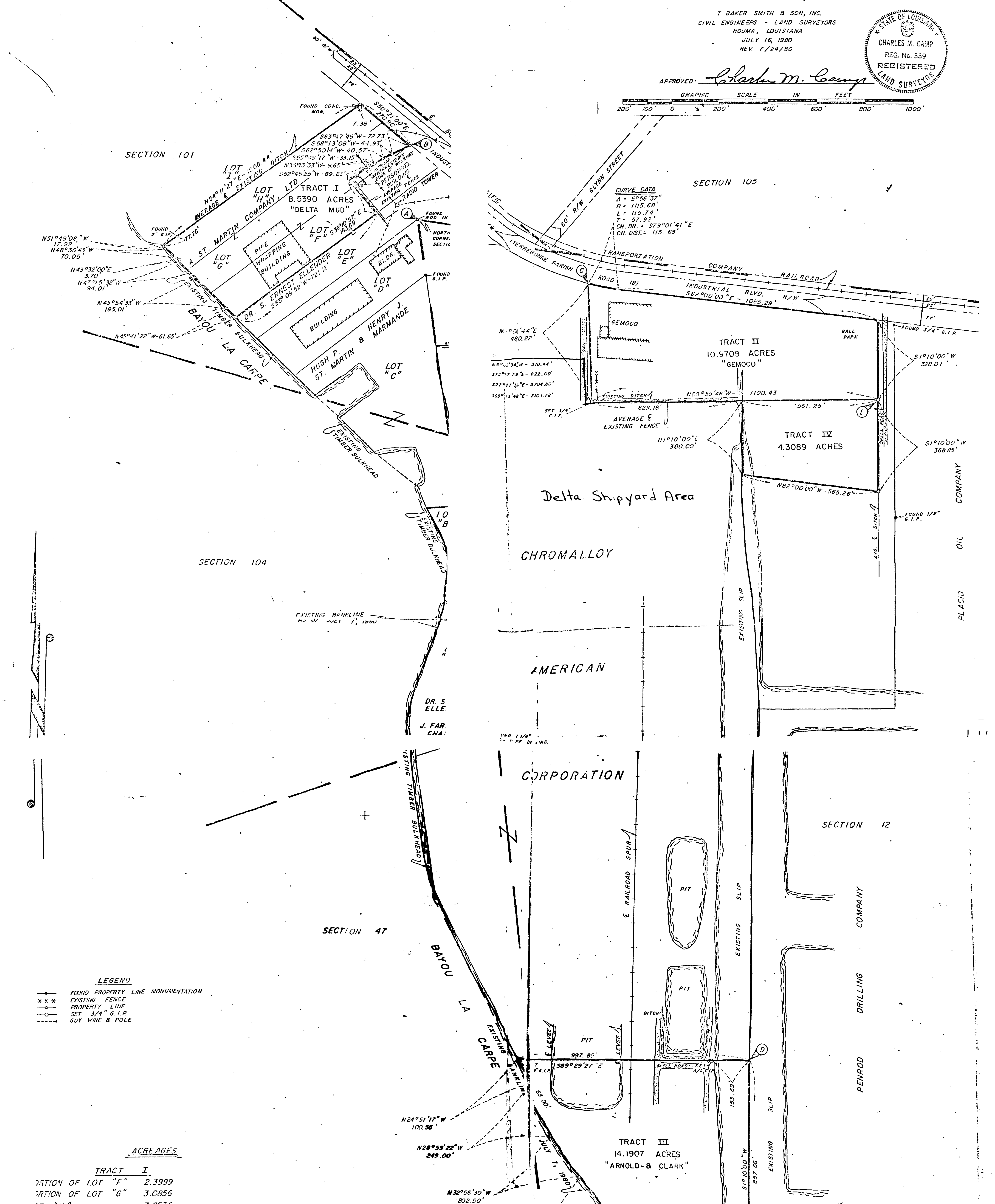
SCALE 1" = 50' FEB. 6, 1980 SHEET 1 OF 1

CHROMALLOY AMERICAN CORPORATION
CHROMALLOY NATURAL RESOURCES DIVISION
SURVEY OF TRACTS I, II & III
IN SECTIONS 12, 47, & 101, T17S-R17E,
TERREBONNE PARISH, LOUISIANA

T. BAKER SMITH & SON, INC.
CIVIL ENGINEERS - LAND SURVEYORS
HOUMA, LOUISIANA
JULY 16, 1980
REV. 7/24/80

APPROVED: Charles M. Camp

STATE OF LOUISIANA — CHARLES M. CAMP — REG. No. 339 — REGISTERED LAND SURVEYOR



GRAPHIC SCALE IN FEET
200' 100' 0 200' 400' 600' 800' 1000'
SECTION 101
SECTION 105
SECTION 104
SECTION 47
SECTION 12
TRACT I
8.5390 ACRES
"DELTA MUD"
LOT "I"
LOT "H"
LOT "G"
LOT "F"
LOT "E"
LOT "D"
LOT "C"
A. ST. MARTIN COMPANY, LTD.
DR. S. ERNEST ELLENDER
HUGH P. ST. MARTIN & HENRY J. MARMANDE
PIPE WRAPPING BUILDING
BUILDING
BLDG.
RADIO TOWER
PERSONNEL BUILDING
N54°11'27"E - 1008.44'
AVERAGE ℄ EXISTING DITCH
S50°21'00"E 270.50'
S63°47'49"W - 72.73'
S68°13'08"W - 44.93'
S62°50'14"W - 40.57'
S55°49'17"W - 33.15'
N35°13'33"W - 9.65'
S52°46'25"W - 89.63'
S36°10'57"E 183.69'
S53°09'52"W - 721.12'
N51°49'08"W 17.99'
N48°30'43"W 70.05'
N43°32'00"E 3.70'
N47°15'32"W 94.01'
N45°54'33"W 185.01'
N45°41'22"W - 61.65'
FOUND CONC. MON.
FOUND 2" G.I.P.
FOUND ROD IN
FOUND G.I.P.
BAYOU LA CARPE
EXISTING TIMBER BULKHEAD
EXISTING BANKLINE AS OF JULY 7, 1980
60' R/W GLYNN STREET
CURVE DATA
Δ = 5°56'37"
R = 1115.68'
L = 115.74'
T = 57.92'
CH. BR. = S79°01'41"E
CH. DIST. = 115.68'
TRANSPORTATION COMPANY RAILROAD
(TERREBONNE PARISH ROAD 18)
INDUSTRIAL BLVD. R/W
S62°00'00"E - 1085.29'
TRACT II
10.9709 ACRES
"GEMOCO"
GEMOCO
BALL PARK
N1°01'44"E 480.22'
N5°33'34"W - 310.44'
S73°37'29"E - 822.00'
S22°27'35"E - 3704.86'
S69°13'48"E - 2101.78'
N88°59'46"W - 1190.43
629.18'
561.25'
AVERAGE ℄ EXISTING FENCE
SET 3/4" G.I.P.
FOUND 3/4" G.I.P.
S1°10'00"W 328.01'
TRACT IV
4.3089 ACRES
N1°10'00"E 300.00'
S1°10'00"W 368.85'
N82°00'00"W - 565.26'
FOUND 1/2" G.I.P.
AVG. ℄ DITCH
SHELL ROAD
Delta Shipyard Area
CHROMALLOY AMERICAN CORPORATION
EXISTING SLIP
PLACID OIL COMPANY
℄ RAILROAD SPUR
PIT
DITCH
℄ LEVEE
LEVEE
997.85'
S89°29'27"E
SHELL ROAD
SET 3/4" G.I.P.
153.69'
63.00'
TRACT III
14.1907 ACRES
"ARNOLD & CLARK"
S1°10'00"W 857.66'
PENROD DRILLING COMPANY
N24°51'17"W 100.55'
N28°59'22"W 249.00'
N32°56'30"W 202.50'
N40°53'55"W 195.11'
81.82'
N51°05'03"W 131.97'
N66°45'45"W 102.29'
N88°50'00"W 154.68'
S81°03'50"W 101.58'
TENNECO OIL COMPANY
LEGEND
FOUND PROPERTY LINE MONUMENTATION
EXISTING FENCE
PROPERTY LINE
SET 3/4" G.I.P.
GUY WIRE & POLE

ACREAGES

TRACT I			
ORTION OF LOT "F"	2.3999		
ORTION OF LOT "G"	3.0856		
OT "H"	3.0535		
LTA MUD"	SUB TOTAL	8.5390	ACRES
TRACT II			
MOCO"	SUB TOTAL	10.9709	ACRES
TRACT III			
NOLD & CLARK"	SUB TOTAL	14.1907	ACRES
TRACT IV			
	SUB TOTAL	4.3089	ACRES
	TOTAL	38.0095	ACRES

DELTA SHIPYARD

TOP CUSTOMERS

9/18/80

Account 2 (Shipyard Operations)

Canal Barge Co., Inc.
835 Union St.
New Orleans, LA 70112
(James O. Gundlach, V.P.)

Ashland Petroleum Co.
P. O. Box 391 (1401 Winchester Ave.)
Ashland, Ky 41101
(Bob Gray, Mgr. Marine Serv.)

Cenac Towing Co.
Foot of Palm Avenue
Houma, LA
(Clark Cenac)

Sabine Towing & Transportation Co., Inc.
P. O. Box 1528
Groves, TX 77619
(Craig Stevenson/K. C. Smith)

Seacoast Products, Inc.
Port Monmoth, N. J.
(201) 787-1000
(Bryan Harris-Engineering, etc.)

Morton Chemical Co.
P. O. Box 280 (Weeks Island)
New Iberia, LA 70560
(Nelson Stelly-Marine Supt.)

Texaco, Inc. (Marketing Dept.)
P. O. Box 1028 (Texaco Island)
Port Arthur, TX 77640
(Dennis Scoog) - also:
Texaco Production Dept.
Van Ave. - Houma

Dixie Carriers, Inc.
P. O. Box 248 (2266 Peters Road)
Harvey, LA 70059
(Tony Blanchard)

Zapata Haynie Corp.
Dulac, LA
(Charles Rice, Maint.)

ATTACHMENT B

SOIL TESTING ENGINEERS, INC.

CONSULTING GEOTECHNICAL ENGINEERS

P. O. BOX 80379 • 316 HIGHLANDIA DRIVE • BATON ROUGE, LOUISIANA 70808 • PHONE (504) 292-4790

ON P. BOUTWELL, JR. PHD
RO B ADAMS, ME
RT L BRYANT, ME
ETH DERICK, MS
ERED PROFESSIONAL ENGINEERS

BROWN, MS

November 26, 1980

T. Baker Smith and Sons, Inc.
Environmental Research Division
P. O. Box 2266
Houma, Louisiana 70361

Attention: Mr. Horace J. Thibodaux, RS
Director of Environmental Research

Re: Preliminary Soil Borings
and Laboratory Testing
Delta Shipyard Disposal Pit
Houma, Louisiana
File: 80-173

Gentlemen:

We have completed the field work and laboratory tests performed on samples obtained from two borings completed during the period November 3 and 4, 1980, at the Delta Shipyard disposal pit. Additionally, two observation wells with caps, were installed close to the borings (see Figure 2). The findings of the borings and the results of the laboratory testing are presented herein. The approximate locations of the borings are shown on the Boring Plan, Figure 1. The soil data on this cross section has been interpolated between the borehole locations and does not define continuity of the strata. For details, refer to the individual logs of the borings. The field and laboratory procedures used in this investigation are discussed below.

It should be noted that a geotechnical/geologic report was not requested at this stage. If such a report is later required, then necessary additional borings and testing, as well as engineering analyses can be performed.

FIELD EXPLORATION

General. The borings were made with tractor-mounted, rotary-type drilling equipment. Samples were obtained continuously in the upper 20 feet; below the 20 foot level, samples were generally obtained on 3 to 5 foot centers. The total exploration program consisted of 100 lineal feet of borings, 40 feet of which were sampled continuously. Logs of the borings are attached. The boreholes were grouted with a thick bentonite/cement grout. Two observation wells were installed as indicated on the Monitoring Well logs (W-1 and W-2) and Figure 1.

ATTACHMENT C

Sampling Procedures. In the cohesive and semi-cohesive soils, relatively undisturbed samples were secured using a 3 inch diameter, thin-wall Shelby Tube sampler. In this sampling procedure, the borehole is advanced to the desired level, and the tube is lowered to the bottom of the boring. It is then forced about 2 feet into the undisturbed soil in one continuous stroke. The tube is retrieved and the sample extruded by a hydraulic piston. The sample is then visually classified and a penetrometer relative strength test performed. Any disturbed portions are discarded, and the sample protected for transportation to the laboratory.

LABORATORY PROCEDURES

Some samples from the various strata were tested in the laboratory to determine their classifications and permeability characteristics. The samples and types of tests performed were selected by a geotechnical engineer. The testing program conducted is described below.

Classification Tests. Thirteen (13) Atterberg Limit Determinations, and one Separate Moisture Content Determination were conducted to classify the soil types.

Consolidation/Permeability Tests. Two (2) Standard Consolidation tests were performed. These were used in determining the Coefficient of Permeability of fine grained soils. The results are given below.

Boring No.	Depth (feet)	Perm. Coef. (cm/sec.)	Soil Description
B-1	6-8	4.3×10^{-8}	Gray organic clay
B-2	12-14	1.2×10^{-7}	Dark gray organic clay (peat)

Chemical Tests. Fourteen (14) pH determinations were performed to determine soil acidity/alkalinity. The results are give on Table I.

The results of the consolidation test are presented on Figure A-I through A-II; the remainder of the testing program is summarized in the appropriate columns of the boring logs.

We will be happy to answer any questions which may arise concerning this information. It has been a pleasure to work with Mr. Thibodaux on this project, and we look forward to serving T. Baker Smith and Sons again in the future.

Sincerely,

Narendra Dave

Narendra M. Dave, EIT
Project Engineer

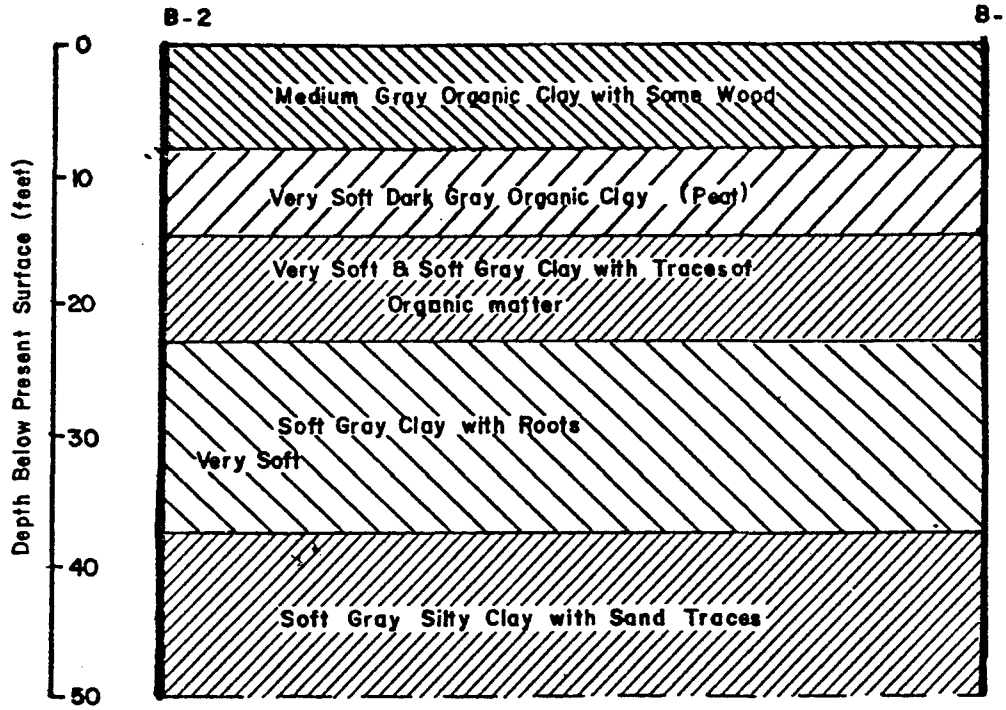
Richard B. Adams

Richard B. Adams, P.E.

/llt

Enclosures

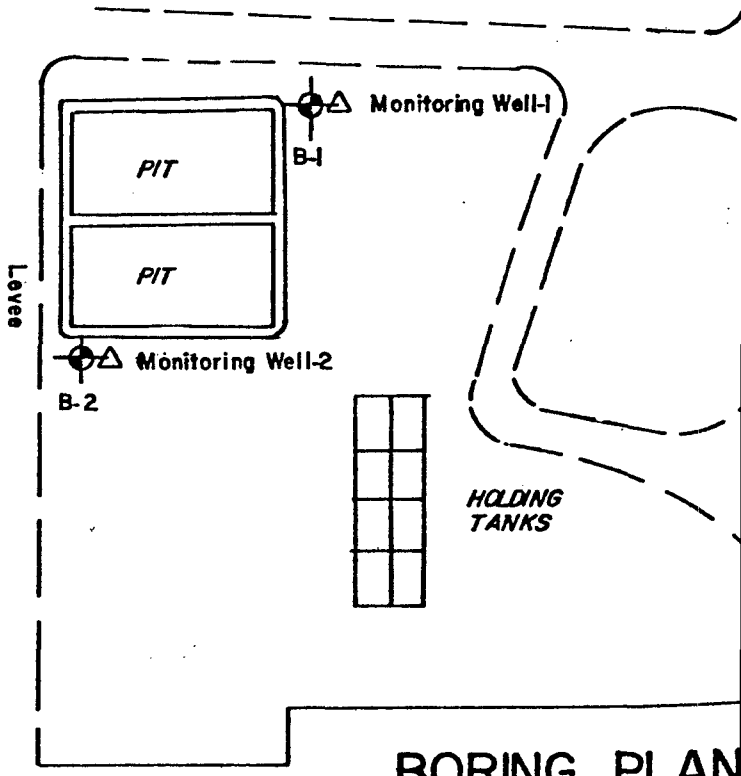
Copies submitted: (4)



SOIL PROFILE

No Horiz. Scale

NOTE:
Strata interpolated between
not define continuity betwe



BORING PLAN

No Scale

SOIL BORING LOG

Project Delta Disposal Pit
Houma, Louisiana

Boring No. B-1

File No. 80-173

Client T. Baker Smith & Sons, Inc.
Houma, Louisiana

Sheet 1 of 2

Date 11/03/80

Tech. Chenevert

FIELD DATA				LABORATORY DATA					Boring Advance Method:
Ground Water Levels	Depth (feet)	Samples	Standard Penetration Test (blows/foot) or Penetrometer(P) (tons/sq.ft)	Compressive Strength (tons/sq.ft.)	Moisture Content (%)	Dry Density (lbs./cu.ft.)	Liquid Limit (%)	Plasticity Index (%)	Wash 0' to 50'
			1.2 (P)						Medium gray organic clay, w/wood
			0.8 (P)		52		102	74	
	5		0.7 (P)						
			0.5 (P)		78		140	93	
			N.P.						Very soft dark gray organic clay (peat)
	10		0.1 (P)		140		218	135	
			0.1 (P)						
			0.5 (P)						Very soft gray clay, w/traces of organic matter
	15		0.2 (P)		37		66	37	
			0.7 (P)						
	20								
			0.6 (P)						Soft gray clay, w/roots
	25								
			0.1 (P)		50		77	42	--very soft
	30								
			0.0 (P)						
	35								
			1.1 (P)		31				Medium gray silty clay, w/sand traces
	40								

SYMBOL

Standard Penetration Test
140 lb. hammer - 30" fall

Undisturbed Sample
3 in. dia. Shelby Tube

No Recovery

Compressive Strength from Unconfined Compression Test
Unless Noted Otherwise

Strata Boundaries May Not Be Exact

SOIL TESTING ENGINEERS, INC.

SOIL BORING LOG

Project Delta Disposal Pit
Houma, Louisiana

Boring No. B-1

Sheet 2 of 2

File No. 80-173

Date 11/03/80

Client T. Baker Smith & Sons, Inc.
Houma, Louisiana

Tech. Chenevert

Ground Water Level	Depth (feet)	Sampling	Standard Penetration Test (blows/foot) or Penetrometer (P) (tons/sq. ft)	Compressive Strength (tons/sq. ft.)	Moisture Content (%)	Dry Density (lbs./cu. ft.)	Liquid Limit (%)	Plasticity Index (%)	
									Soft gray silty clay, w/sand traces
	45		0.6 (P)						
			0.5 (P)		38		38	14	
	50								Boring terminated @ 50'

SYMBOL

- Standard Penetration Test 140 lb. hammer - 30" fall
- Undisturbed Sample 3 in. dia. Shelby Tube
- No Recovery

Compressive Strength from Unconfined Compression Test Unless Noted Otherwise

Strata Boundaries May Not Be Exact

SOIL TESTING ENGINEERS, INC.

SOIL BORING LOG

Project: Delta Disposal Pit, Houma, Louisiana
Client: T. Baker Smith & Sons, Inc., Houma, Louisiana
Boring No. B-2
Sheet 1 of 2
File No. 80-173
Date 11/04/80
Tech. A. Kahn

Depth (feet)	Sampling	Standard Penetration Test (blows/foot) or Penetrometer(P) (tons/sq.ft)	Compressive Strength (tons/sq.ft.)	Moisture Content (%)	Dry Density (lbs./cu.ft.)	Liquid Limit (%)	Plasticity Index (%)	Boring Advance Method: Auger 0' to 2', Wash 2' to 50'
		1.2 (P)		41		107	68	Medium gray organic clay, w/some wood
		0.7 (P)		54		101	54	
5		0.6 (P)						
		N.P.						
		0.3 (P)		131		154	107	Very soft dark gray organic clay (peat)
10		0.3 (P)						
		0.4 (P)		110		284	162	
15		0.5 (P)						Soft gray clay, w/traces of organic matter
		0.2 (P)						
20		1.2 (P)		39		88	60	
		0.5 (P)						Soft gray clay, w/wood & roots
25								
		0.4 (P)						
30								
		0.1 (P)		35		63	38	--very soft
35								
		0.3 (P)						Soft gray silty clay, w/sand traces
40								

Symbol

- Standard Penetration Test 140 lb. hammer-30" fall
- Undisturbed Sample 3in. dia. Shelby Tube
- No Recovery
- Compressive Strength from Unconfined Compression Test Unless Noted Otherwise
- Strata Boundaries May Not Be Exact

▽ Free Water First Encountered

▽ Water Level After 10 minutes (Prior to Wash Boring)

SOIL TESTING ENGINEERS, INC.

SOIL BORING LOG

Project Delta Disposal Pit
Houma, Louisiana

Client T. Baker Smith & Sons, Inc.
Houma, Louisiana

Boring No. B-2 **Sheet** 2 of 2

File No. 80-173
Date 11/04/80
Tech. Chenevert

FIELD DATA				LABORATORY DATA					
Ground Water Levels	Depth (feet)	Sampling	Standard Penetration Test (blows/foot) or Penetrometer (P) (tons/sq.ft)	Compressive Strength (tons/sq.ft.)	Moisture Content (%)	Dry Density (lbs./cu.ft.)	Liquid Limit (%)	Plasticity Index (%)	
	45		0.3 (P)		32		35	9	Soft gray silty clay, w/sand traces
	50		0.7 (P)						Boring terminated @ 50'

WATER LEVEL

- Standard Penetration Test
  140 lb. hammer-30" fall
- Undisturbed Sample
  3in. dia. Shelby Tube
- No Recovery

Compressive Strength from Unconfined Compression Test
Unless Noted Otherwise
Strata Boundaries May Not Be Exact

SOIL TESTING ENGINEERS, INC.

MONITORING WELL LOG

Boring No. W-1

Project: Delta Disposal Pit
Houma, Louisiana

Client: T. Baker Smith & Sons, Inc.
Houma, Louisiana

File No. 80-173
Date 11/03/80
By Chenevert

FIELD DATA

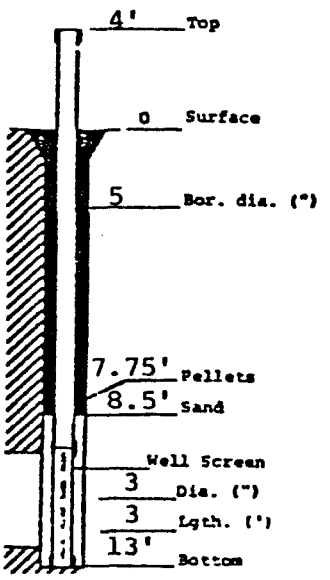
Boring Advance Method:
Wash 0' to 12'

Drill Rig: 200
Driller: James Kelly

DEPTH (feet)	SAMPLING	Standard Penetration Test (blows/foot) or Penetrometer (P) - Torvane (T) (tons/sq. ft.)	
5			SEE BORING B-1
10			Boring terminated @ 12'

Monitoring Well Data

Well No. 1



Standard Penetration Test (140 lb hammer - 30 in fall)

Undisturbed Sample 3 in. dia. Shelby Tube

No Recovery

Strata boundaries inferred and may not be exact

SOIL TESTING ENGINEERS, INC

MONITORING WELL LOG

Boring No. W-2

Project: Delta Disposal Pit
Houma, Louisiana

Client: T. Baker Smith & Sons, Inc.
Houma, Louisiana

File No. 80-173
Date 11/04/80
By Chenevert

FIELD DATA			Boring Advance Method:	
Water Levels	DEPTH (feet)	Sampling / Standard Penetration Test (blows / foot) or Penetrometer (P) - Torvane (T) (tons / sq. ft.)	Wash 0' to 20'	Drill Rig: 200 Driller: James Kelly

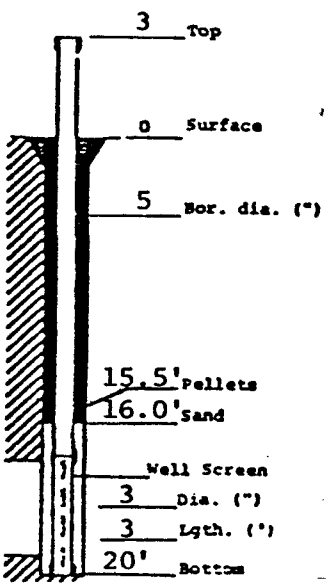
5
10
15
20

SEE BORING B-2

Boring terminated @ 20'

Monitoring Well Data

Well No. 2



Standard Penetration Test
140 lb hammer - 30 in fall

Undisturbed Sample
3 in dia Shelby Tube

No Recovery

Strata boundaries inferred and may not be exact

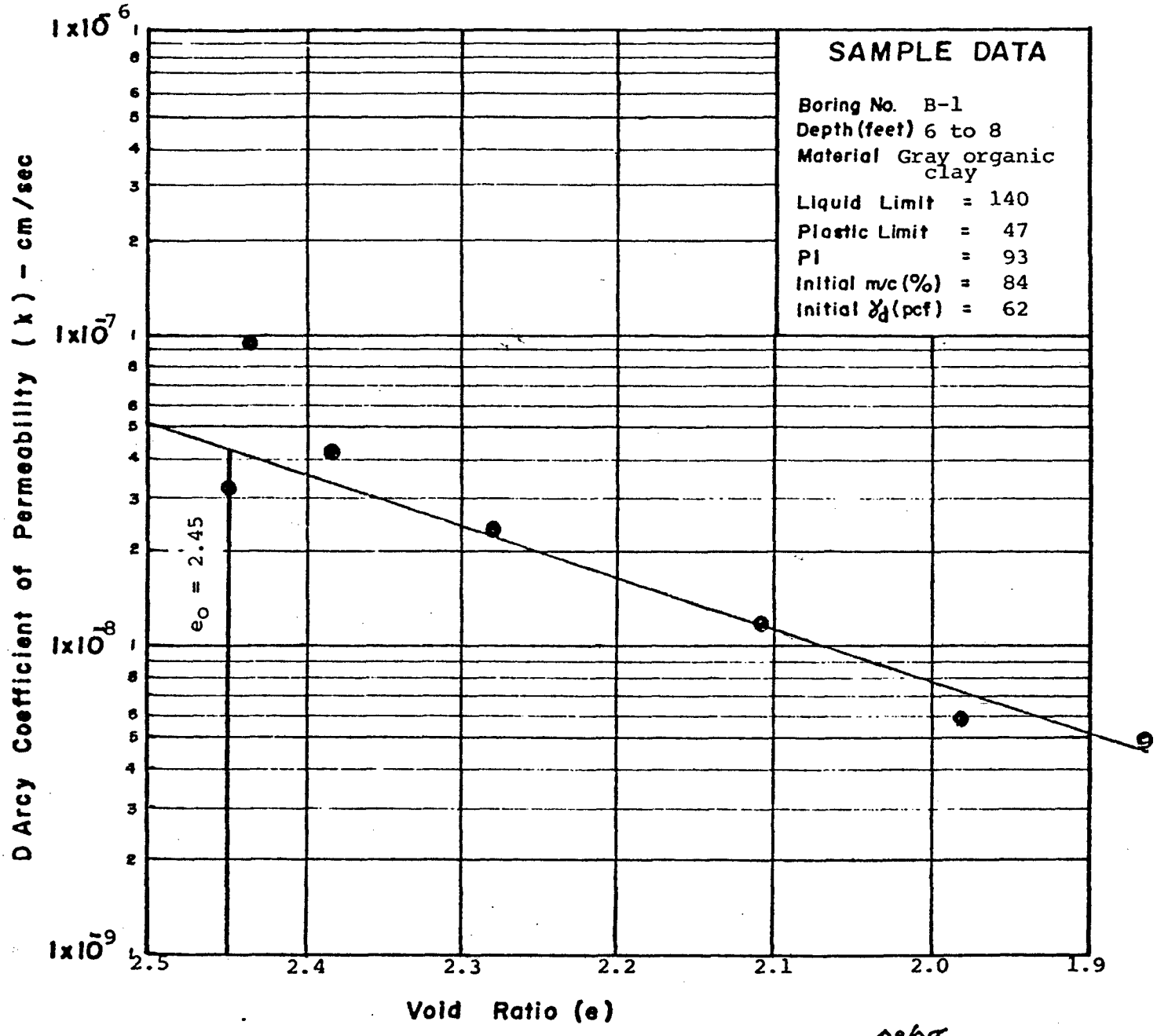
SOIL TESTING ENGINEERS, INC

TABLE I

CHEMICAL ANALYSIS

Boring No.	Depth (feet)	pH
1	2.0 to 4	7.3
1	6.0 to 8	7.9
1	10.0 to 12	5.9
1	16.0 to 18	7.3
1	28.0 to 30	8.2
1	38.0 to 40	8.1
2	0 to 2	6.8
2	4.0 to 6	7.7
2	8.0 to 10	7.5
2	12.0 to 14	6.3
2	18.0 to 20	8.0
2	33.0 to 35	8.0
2	43.0 to 45	8.0

SOIL TESTING ENGINEERS, INC.



$$k = C_v \gamma_w \frac{\Delta e / \Delta \sigma}{1 + e_o}$$

● Raw Data Point

——— Best Fit Linear Regression in Stable Range

C_v = Coeff. of Consolidation
Δe = Change in Void Ratio
$\Delta \sigma$ = Change in Pressure
γ_w = Unit Weight of Water

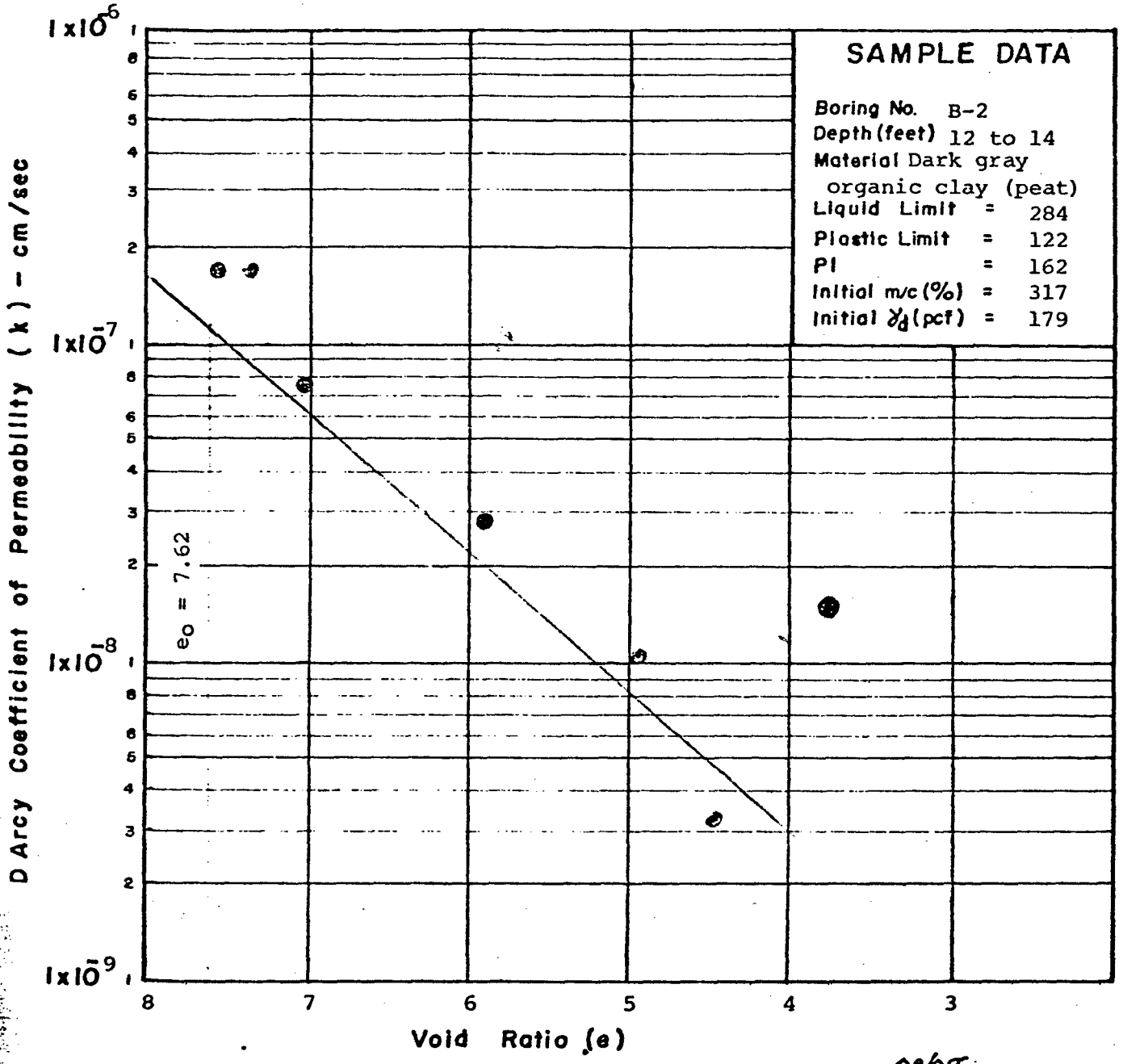
$k = 4.3 \times 10^{-8}$ cm/sec at $e_o = 2.45$

PERMEABILITY DETERMINED BY CONSOLIDATION TEST

Delta Shipyard Disposal Pit
Houma, Louisiana

80-173
Figure A-IB

SOIL TESTING ENGINEERS, INC.



$$k = C_v \gamma_w \frac{\Delta e / \Delta \sigma}{1 + e_o}$$

● Raw Data Point

—— Best Fit Linear Regression in Stable Range

C_v = Coeff. of Consolidation
Δe = Change in Void Ratio
$\Delta \sigma$ = Change in Pressure
γ_w = Unit Weight of Water

$k = 1.2 \times 10^{-7}$ cm/sec at $e_o = 7.62$

PERMEABILITY DETERMINED BY CONSOLIDATION TEST

Delta Shipyard Disposal Pit
Houma, Louisiana

80-173
Figure A-IIB

Photographer / Witness PHOTO #4

G. Duncan / D. Vaughn

Date / Time / Direction

3-11-81 / 11:10 / W

Comments: View of both pits and levee

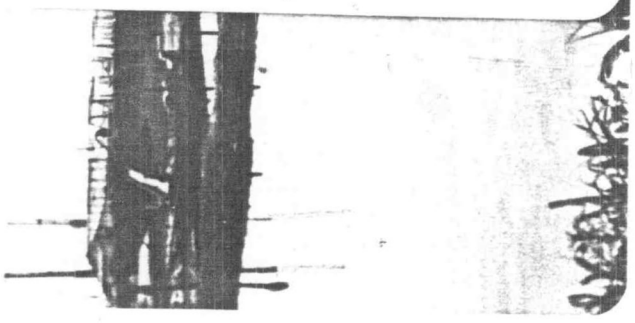
Photographer / Witness PHOTO #5

G. Duncan / D. Vaughn

Date / Time / Direction

3-11-81 / 11:17 / SE to S

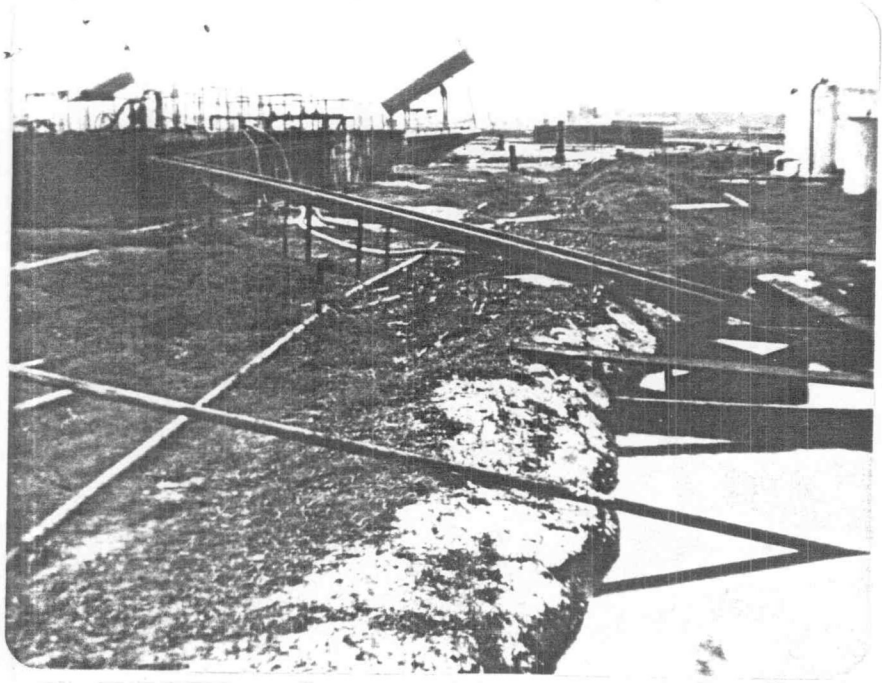
Comments: panorama of pits, including separator, boiler at extreme left, and storage tanks at right.



Photographer / Witness

Date / Time / Direction

Comments:



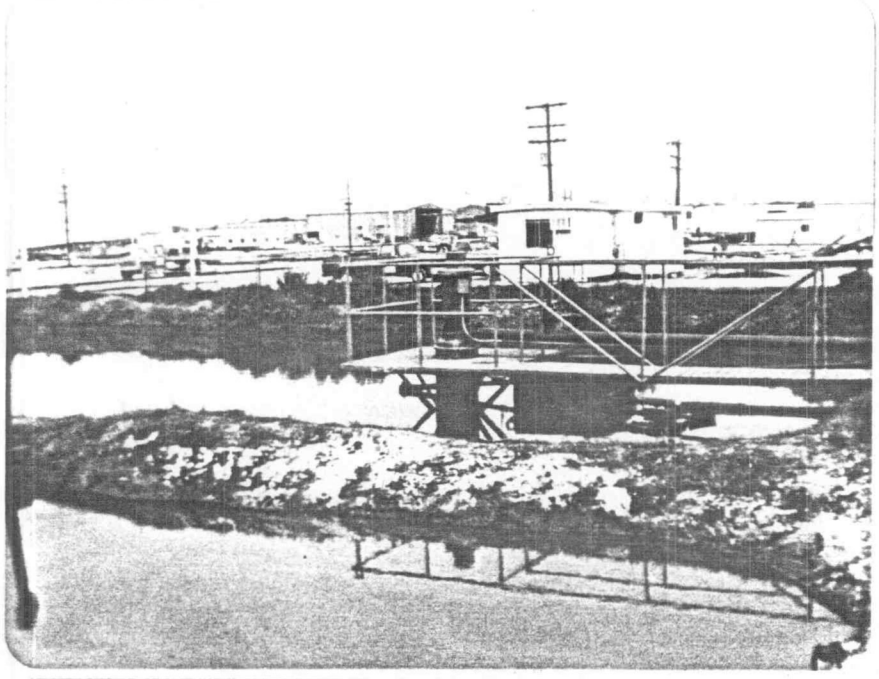
Photographer / Witness PHOTO #1

G. Duncan / D. Vaughn

Date / Time / Direction

3-11-81 / 11:00 / SE

Comments: Surface impoundment in foreground; upperleft background shows seperator tank and overflow trough



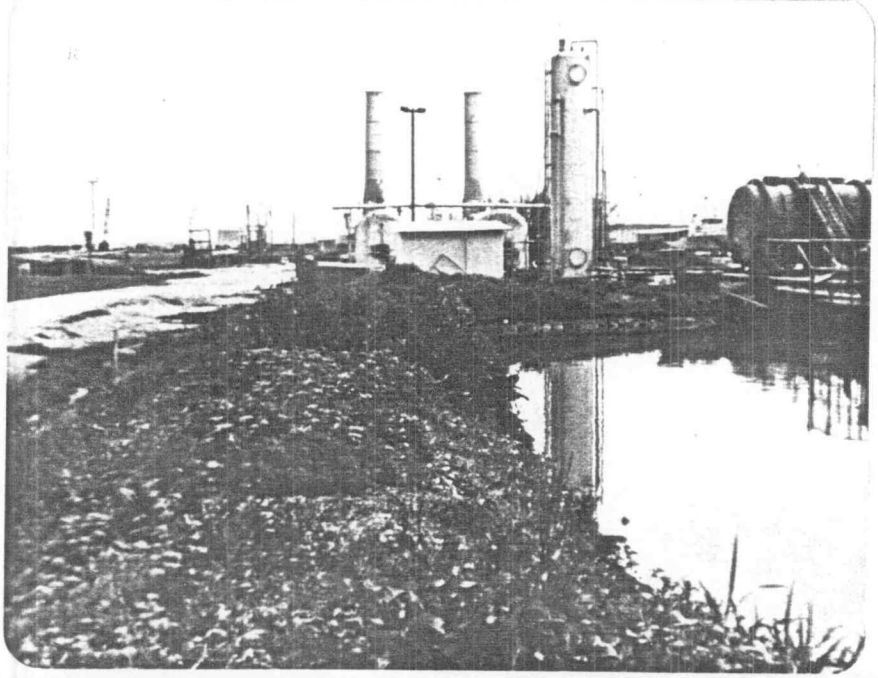
Photographer / Witness PHOTO #2

G. Duncan / D. Vaughn

Date / Time / Direction

3-11-81 / 11:05 / NW

Comments: suction line from waste water impoundments to boilers.



Photographer / Witness PHOTO #3

G. Duncan / D. Vaughn

Date / Time / Direction

3-11-81 / 11:07 / ~~SW~~ East

Comments: looking towards steam cleaning boilers and Northern part of waste impoundments.